

Karlson

P#21



1653

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/445,362B

DATE: 04/12/2002

TIME: 15:09:45

Input Set : A:\50125.008001.SEQLIST.TXT

Output Set: N:\CRF3\04122002\I445362B.raw

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APR 22 2002

TECH CENTER 1600/2900

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4 <110> APPLICANT: Hofmann, Marion Elke
5      Domdey, Horst
6      Henkel, Thomas
8 <120> TITLE OF INVENTION: Myocardium-and-Skeletal Muscle-Specific
9      Nucleic Acid, Its Preparation and Use
12 <130> FILE REFERENCE: 50125/008001
14 <140> CURRENT APPLICATION NUMBER: US 09/445,362B
15 <141> CURRENT FILING DATE: 2000-05-15
17 <150> PRIOR APPLICATION NUMBER: PCT/EP98/03584
18 <151> PRIOR FILING DATE: 1998-06-15
20 <150> PRIOR APPLICATION NUMBER: DE 19725186.2
21 <151> PRIOR FILING DATE: 1997-06-13
23 <160> NUMBER OF SEQ ID NOS: 7
25 <170> SOFTWARE: FastSEQ for Windows Version 4.0
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 1936
29 <212> TYPE: DNA
30 <213> ORGANISM: Homo sapiens
32 <400> SEQUENCE: 1
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34 tccttctgagg tctgacaaag cagggaccat gtctaccttt ggctaccgaa gaggactcag 120
35 taaatacgaa tccatcgacg aggatgaact cctcgccctc ctgtcagccg aggagctgaa 180
36 ggagctagag agagagttgg aagacattga acctgaccgc aaccttcccg tggggctaag 240
37 gcaaaagagc ctgacagaga aaacccccac agggacattc agcagagagg cactgatggc 300
38 ctattgggaa aaggagtccc aaaaactctt ggagaaggag aggctggggg aatgtggaaa 360
39 ggttgcagaa gacaaagagg aaagtgaaga agagcttata tttactgaaa gtaacagtga 420
40 ggtttctgag gaagtgtata cagaggagga ggaggaggag tcccaggagg aagaggagga 480
41 agaagacagt gacgaagagg aaagaacaat tgaaactgca aaagggatta atggaactgt 540
42 aaattatgat agtgtcaatt ctgacaactc taagccaaag atatttaaaa gtcaaataga 600
43 gaacataaat ttgaccaatg gcagcaatgg gaggaacaca gagtccccag ctgccattca 660
44 cccttgtaga aatcctacag tgattgagga cgctttggac aagattaaaa gcaatgacct 720
45 tgacaccaca gaagtcaatt tgaacaacat tgagaacatc acaacacaga cccttaccog 780
46 ctttgcctgaa gccctcaagg acaacactgt ggtgaagacg ttcagtctgg ccaacacgca 840
47 tgccgacgac agtgcagcca tggccattgc agagatgctc aaagccaatg agcacatcac 900
48 caacgtaaac gtcgagtcca acttcataac gggaaagggg atcctggcca tcatgagagc 960
49 tctccagcac aacacggtgc tcacggagct gcgtttccat aaccagaggc acatcatggg 1020
50 cagccaggtg gaaatggaga ttgtcaagct gctgaaggag aacacgacgc tgctgaggct 1080
51 gggataccat tttgaactcc caggaccaag aatgagcatg acgagcattt tgacaagaaa 1140
52 tatggataaa cagaggcaaa aacgtttgca ggagcaaaaa cagcaggagg gatacagatg 1200
53 aggacccaat cttaggacca aagtctggca aagaggaaca cctagctctt cacottatgt 1260
54 atctcccagg cactcaccct ggtcatcccc aaaactcccc aaaaaagttc agactgtgag 1320
55 gagccgtcct ctgtctcctg tgccacact tcctcctcct cccctcctc ctcctcctcc 1380
56 ccctccttct tcccaaaggc tgccaccacc tcctcctcct cccctcctc cactcccaga 1440

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57 gaaaaagctc attaccagaa acattgcaga agtcatcaaa caacaggaga gtgccaacg 1500
58 ggcattacaa aatggacaaa aaaagaaaaa agggaaaaag gtcaagaaac agccaaacag 1560
59 tattctaaag gaaataaaaa attctctgag gtcagtgcga gagaagaaaa tggaagacag 1620
60 ttcccgacct tctacccac agagatcagc tcatgagaat ctcatggaag caattcgggg 1680
61 aagcagcata aaacagctaa agcgggtgga agttccagaa gccctgcgat gggaacatga 1740
62 tctttagaag aggatgcaga actgttcagt ggtattacat gaaatgcatt gtgagatgtt 1800
63 tctaaaatac cttcttcaat tcaaaatgat ccctgacttt aaaaataatc tcaccatta 1860
64 attccaaaga gaatcttaag aaacaatcag catgtttctt ctgtaaataat gaaaataaat 1920
65 ttctttttta tgtcgt 1936
67 <210> SEQ ID NO: 2
68 <211> LENGTH: 2080
69 <212> TYPE: DNA
70 <213> ORGANISM: Homo sapiens
72 <400> SEQUENCE: 2
73 cagcctgcc cttgctccc tgctgtctt tggctgcctt gaatgcctgg tcttcaagc 60
74 tcttctggt tctgacaaag cagggacct gtctacctt ggctaccga gaggactcag 120
75 taaatacgaa tccatcgacg aggatgaact cctcgctctc ctgtcagccg aggagctgaa 180
76 ggagctagag agagagttg aagacattga acctgaccgc aaccttccc tggggctaag 240
77 gcaaaagagc ctgacagaga aaacccccac agggacattc agcagagagg cactgatggc 300
78 ctattgggaa aaggagtccc aaaaactctt ggagaaggag aggtggggg aatgtggaaa 360
79 ggttgcaaaa gacaaagagg aaagtgaaga agagcttatc tttactgaaa gtaacagtga 420
80 ggtttctgag gaagtgtata cagaggagga ggaggaggag tcccaggagg aagaggagga 480
81 agaagacagt gacgaagagg aaagaacaat tgaactgca aaagggatta atggaactgt 540
82 aaattatgat agtgtcaatt ctgacaactc taagccaaag atatttaaaa gtcaaataga 600
83 gaacataaat ttgaccaatg gcagcaatgg gaggaacaca gagtccccag ctgccattca 660
84 cccttggtga aatcctacag tgattgagga cgctttggac aagattaaaa gcaatgacct 720
85 tgacaccaca gaagtcaatt tgaacaacat tgagaacatc acaacacaga cccttaccg 780
86 ctttgctgaa gccctcaagg acaacactgt ggtgaagacg ttcagtctgg ccaacacgca 840
87 tgccgacgac agtgcagcca tggccattgc agagatgctc aaagccaatg agcacatcac 900
88 caacgtaaac gtcgagtcca acttcataac gggaaagggg atcctggcca tcatgagagc 960
89 tctccagcac aacacggtgc tcacggagct gcgtttccat aaccagaggc acatcatggg 1020
90 cagccagggtg gaaatggaga ttgtcaagct gctgaaggag aacacgacgc tgctgaggct 1080
91 gggataccat tttgaactcc caggaccaag aatgagcatg acgagcattt tgacaagaaa 1140
92 tatggataaa cagaggcaaa aacgtttgca ggagcaaaaa cagcaggagg gatacgatgg 1200
93 aggacccaat cttaggacca aagtctggca aagaggaaca cctagctctt caccttatgt 1260
94 atctcccagg cactcaccct ggtcatcccc aaaactcccc aaaaaagtc agactgtgag 1320
95 gagcgtctct ctgtctctg tggccacact tctctctct cccctctct cctctctcc 1380
96 cctctctct tcccaaaggc tgccaccacc tctctctct cccctctct cactcccaga 1440
97 gaaaaagctc attaccagaa acattgcaga agtcatcaaa caacaggaga gtgccaacg 1500
98 ggcattacaa aatggacaaa aaaagaaaaa agggaaaaag gtcaagaaac agccaaacag 1560
99 tattctaaag gaaataaaaa attctctgag gtcagtgcga gagaagaaaa tggaagacag 1620
100 ttcccgacct tctacccac agagatcagc tcatgagaat ctcatggaag caattcgggg 1680
101 aagcagcata aaacagctaa agcgggtgga agttccagaa gccctgcgat gggaacatga 1740
102 tctttagaag aggatgcaga actgttcagt ggtattacat gaaatgcatt gtgagatgtt 1800
103 tctaaaatac cttcttcaat tcaaaatgat ccctgacttt aaaaataatc tcaccatta 1860
104 attccaaaga gaatcttaag aaacaatcag catgtttctt ctgtaaataat gaaaataaat 1920
105 ttctttttta tgtcgtgaga tttgtattgg caagaagcag ttaatttaaa gatgctcttc 1980
106 ctatctgtgg atgtgttgg aactccgagt tgtaatgagt tcatgaaatg tgtgtttatt 2040
107 tttgtaatct caataaatgt ggattgaagt tttttccctt 2080

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109 <210> SEQ ID NO: 3
110 <211> LENGTH: 2268
111 <212> TYPE: DNA
112 <213> ORGANISM: Homo sapiens
114 <400> SEQUENCE: 3
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116 tccttctctggg tctgacaaag cagggaccat gtctaccttt ggctaccgaa gaggactcag 120
117 taaatacgaa tccatcgacg aggatgaact cctgcctccc ctgtcagccg aggagctgaa 180
118 ggagctagag agagagttgg aagacattga acctgaccgc aaccttcccg tggggctaag 240
119 gcaaaagagc ctgacagaga aaacccccac agggacattc agcagagagg cactgatggc 300
120 ctattgggaa aaggagtccc aaaaactctt ggagaaggag aggctggggg aatgtggaaa 360
121 gggtgcagaa gacaaagagg aaagtgaaga agagcttatt tttactgaaa gtaacagtga 420
122 ggtttctgag gaagtgtata cagaggagga ggaggaggag tcccaggagg aagaggagga 480
123 agaagacagt gacgaagagg aaagaacaat tgaaactgca aaagggatta atggaactgt 540
124 aaattatgat agtgtcaatt ctgacaactc taagccaaag atatttaaaa gtcaaataga 600
125 gaacataaat ttgaccaatg gcagcaatgg gaggaacaca gagtccccag ctgccattca 660
126 cccttgttga aatcctacag tgattgagga cgctttggac aagattaaaa gcaatgaccc 720
127 tgacaccaca gaagtcaatt tgaacaacat tgagaacatc acaacacaga cccttaccgg 780
128 ctttgtctgaa gccctcaagg acaacactgt ggtgaagacg ttcagtctgg ccaacacgca 840
129 tgccgacgac agtgcagcca tggccattgc agagatgtct aaagccaatg agcacatcac 900
130 caacgtaaac gtgcagtgcca acttcataac gggaaaaggg atcctggcca tcatgagagc 960
131 tctccagcac aacacgggtg tcacggagct gcgtttccat aaccagaggc acatcatggg 1020
132 cagccaggtg gaaatggaga ttgtcaagct gctgaaggag aacacgacgc tgctgaggct 1080
133 gggataccat tttgaactcc caggaccaag aatgagcatg acgagcattt tgacaagaaa 1140
134 tatggataaa cagaggcaaa aacgtttgca ggagcaaaaa cagcaggagg gatacgatgg 1200
135 aggacccaat cttaggacca aagtctggca aagaggaaca cctagctctt cacccttatgt 1260
136 atctcccagg cactcaccct ggtcatcccc aaaactcccc aaaaaagtc agactgtgag 1320
137 gagecgtcct ctgtctcctg tggccacact tcctcctcct cccctcctc ctcctcctcc 1380
138 ccctccttct tcccaaaggc tgccaccacc tcctcctcct cccctcctc cactcccaga 1440
139 gaaaaagtc attaccagaa acattgcaga agtcatcaaa caacaggaga gtgcccacg 1500
140 ggcattacaa aatggacaaa aaaagaaaaa agggaaaaag gtcaagaaac agccaaacag 1560
141 tattctaaag gaaataaaaa attctctgag gtcagtgcaa gagaagaaaa tggaagacag 1620
142 ttcccacact tctacccccc agagatcagc tcatgagaat ctcatggaag caattcgggg 1680
143 aagcagcata aaacagctaa agcgggtgga agttccagaa gccctgcgat gggaacatga 1740
144 tctttagaag aggatgcaga actgttcagt ggtattacat gaaatgcatt gtgagatgtt 1800
145 tctaaaatac cttcttcaat tcaaaatgat ccctgacttt aaaaataatc tcaccatta 1860
146 attccaaaga gaatcttaag aaacaatcag catgtttctt ctgtaaatat gaaaataaat 1920
147 ttctttttta tgcgtgaga tttgtattgg caagaagcag ttaatttaaa gatgctcttc 1980
148 ctatctgtgg atgtgttggg aactccgagt tgtaatgagt tcatgaaatg tgctgttatt 2040
149 tttgtaatct caataaatgt ggattgaagt ttttccctt tttttaaagc caaactaata 2100
150 tttttctgtg acttgataca tctgtcagat ttttgaatc tcgataaatg tgtattgaag 2160
151 ttttttccct ttttttaaaa agccaaacta atatttttct gtgagttaat acatctgtca 2220
152 ggtgtgatg taacattact ggacattaaa aaaaattatt acattctc 2268
154 <210> SEQ ID NO: 4
155 <211> LENGTH: 552
156 <212> TYPE: PRT
157 <213> ORGANISM: Homo sapiens
159 <400> SEQUENCE: 4
160 Met Ser Thr Phe Gly Tyr Arg Arg Gly Leu Ser Lys Tyr Glu Ser Ile

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161 1 5 10 15
162 Asp Glu Asp Glu Leu Leu Ala Ser Leu Ser Ala Glu Glu Leu Lys Glu
163 20 25 30
164 Leu Glu Arg Glu Leu Glu Asp Ile Glu Pro Asp Arg Asn Leu Pro Val
165 35 40 45
166 Gly Leu Arg Gln Lys Ser Leu Thr Glu Lys Thr Pro Thr Gly Thr Phe
167 50 55 60
168 Ser Arg Glu Ala Leu Met Ala Tyr Trp Glu Lys Glu Ser Gln Lys Leu
169 65 70 75 80
170 Leu Glu Lys Glu Arg Leu Gly Glu Cys Gly Lys Val Ala Glu Asp Lys
171 85 90 95
172 Glu Glu Ser Glu Glu Glu Leu Ile Phe Thr Glu Ser Asn Ser Glu Val
173 100 105 110
174 Ser Glu Glu Val Tyr Thr Glu Glu Glu Glu Glu Glu Ser Gln Glu Glu
175 115 120 125
176 Glu Glu Glu Glu Asp Ser Asp Glu Glu Glu Arg Thr Ile Glu Thr Ala
177 130 135 140
178 Lys Gly Ile Asn Gly Thr Val Asn Tyr Asp Ser Val Asn Ser Asp Asn
179 145 150 155 160
180 Ser Lys Pro Lys Ile Phe Lys Ser Gln Ile Glu Asn Ile Asn Leu Thr
181 165 170 175
182 Asn Gly Ser Asn Gly Arg Asn Thr Glu Ser Pro Ala Ala Ile His Pro
183 180 185 190
184 Cys Gly Asn Pro Thr Val Ile Glu Asp Ala Leu Asp Lys Ile Lys Ser
185 195 200 205
186 Asn Asp Pro Asp Thr Thr Glu Val Asn Leu Asn Asn Ile Glu Asn Ile
187 210 215 220
188 Thr Thr Gln Thr Leu Thr Arg Phe Ala Glu Ala Leu Lys Asp Asn Thr
189 225 230 235 240
190 Val Val Lys Thr Phe Ser Leu Ala Asn Thr His Ala Asp Asp Ser Ala
191 245 250 255
192 Ala Met Ala Ile Ala Glu Met Leu Lys Ala Asn Glu His Ile Thr Asn
193 260 265 270
194 Val Asn Val Glu Ser Asn Phe Ile Thr Gly Lys Gly Ile Leu Ala Ile
195 275 280 285
196 Met Arg Ala Leu Gln His Asn Thr Val Leu Thr Glu Leu Arg Phe His
197 290 295 300
198 Asn Gln Arg His Ile Met Gly Ser Gln Val Glu Met Glu Ile Val Lys
199 305 310 315 320
200 Leu Leu Lys Glu Asn Thr Thr Leu Leu Arg Leu Gly Tyr His Phe Glu
201 325 330 335
202 Leu Pro Gly Pro Arg Met Ser Met Thr Ser Ile Leu Thr Arg Asn Met
203 340 345 350
204 Asp Lys Gln Arg Gln Lys Arg Leu Gln Glu Gln Lys Gln Gln Glu Gly
205 355 360 365
206 Tyr Asp Gly Gly Pro Asn Leu Arg Thr Lys Val Trp Gln Arg Gly Thr
207 370 375 380
208 Pro Ser Ser Ser Pro Tyr Val Ser Pro Arg His Ser Pro Trp Ser Ser
209 385 390 395 400

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210 Pro Lys Leu Pro Lys Lys Val Gln Thr Val Arg Ser Arg Pro Leu Ser
211                               405                               410                               415
212 Pro Val Ala Thr Leu Pro Pro Pro Pro Pro Pro Pro Pro Pro Pro
213                               420                               425                               430
214 Pro Ser Ser Gln Arg Leu Pro Pro Pro Pro Pro Pro Pro Pro Pro
215                               435                               440                               445
216 Leu Pro Glu Lys Lys Leu Ile Thr Arg Asn Ile Ala Glu Val Ile Lys
217                               450                               455                               460
218 Gln Gln Glu Ser Ala Gln Arg Ala Leu Gln Asn Gly Gln Lys Lys Lys
219 465                               470                               475                               480
220 Lys Gly Lys Lys Val Lys Lys Gln Pro Asn Ser Ile Leu Lys Glu Ile
221                               485                               490                               495
222 Lys Asn Ser Leu Arg Ser Val Gln Glu Lys Lys Met Glu Asp Ser Ser
223                               500                               505                               510
224 Arg Pro Ser Thr Pro Gln Arg Ser Ala His Glu Asn Leu Met Glu Ala
225                               515                               520                               525
226 Ile Arg Gly Ser Ser Ile Lys Gln Leu Lys Arg Val Glu Val Pro Glu
227                               530                               535                               540
228 Ala Leu Arg Trp Glu His Asp Leu
229 545                               550

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232 <210> SEQ ID NO: 5
233 <211> LENGTH: 10
234 <212> TYPE: DNA
235 <213> ORGANISM: Homo sapiens
237 <400> SEQUENCE: 5
238 ccttctaccc

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10

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240 <210> SEQ ID NO: 6
241 <211> LENGTH: 278
242 <212> TYPE: DNA
243 <213> ORGANISM: Homo sapiens
245 <220> FEATURE:
246 <221> NAME/KEY: misc_feature
247 <222> LOCATION: 12, 50, 222, 243, 255, 265
248 <223> OTHER INFORMATION: n = A,T,C or G
250 <400> SEQUENCE: 6

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W--> 251 gccaacacgc antccgacga cagtgcagcc atggtcattg cagagatgcn caaagtcaat 60
252 gaggacatca ccaacgtaaa cgtcgagtcc aacttcataa cgggaaaggg gatcctggcc 120
253 atcatgagag ctctccagca caacacggtg ctcacggagc tgcgggtttca taaccagagg 180
W--> 254 cacatcatgg gcagccaggt ggaaatggag attgtcaagc tinctgaagga gaacacgacg 240
W--> 255 ctncctgaggc tgggntacca ttttnaactc ccaggacc 278

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257 <210> SEQ ID NO: 7
258 <211> LENGTH: 92
259 <212> TYPE: PRT
260 <213> ORGANISM: Homo sapiens
262 <400> SEQUENCE: 7
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264 1 5 10 15
265 Ile Lys Val Asn Glu His Ile Thr Asn Val Asn Val Glu Ser Asn Phe
266 20 25 30

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